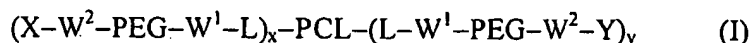


AMENDMENTS TO THE CLAIMS

1. (Currently amended) A biosensor system for bioassay which comprises, as a set,
(A) polyethylene glycol-modified nanoparticles of a structural formula I:



wherein

PCL stands for a free electron metal fine particle, metal oxide fine particle or semiconductor fine particle;

X stands for a functional group or functional moiety capable of binding directly to a biosensor chip surface;

Y stands for at least one group or moiety which is selected from the group consisting of C₁-C₆ alkyl, a group or moiety defined above as X, and a group or moiety defined above as X which is protected, wherein X and Y are not the same simultaneously;

L stands for a linker group or moiety linked to PCL;

W¹ and W² stand for single bonds or same or different linkers, wherein L is different from W¹ and W²;

PEG stands for ethylene oxide units, (-CH₂CH₂O-)_n, wherein n is an integer of 5 - 10,000,

W², PEG, W¹ and L in (X-W²-PEG-W¹-L)_x and (L-W¹-PEG-W²-Y)_y are same or different, and

x and y are integers of 1 or more independently of each other, which together represent an integer sufficient for the PEG chains to cover the PCL surface in an aqueous medium and

(B) a biosensor chip having a surface to which above (A) particles can bind via X, ~~and wherein the surface is made of glass or a material corresponding to that of PCL~~

wherein X is a residue of a member forming a biological specific binding pair;
and wherein

(B) sensor chip has a thin membrane surface made of a material corresponding to that constituting PCL in the structural formula I, said surface carrying the other member which forms said biological specific binding pair with said member X, either directly or